

- (a) Factor: $2x^2 - 6x$
- b) Determine the zeros.
- c) Where is the vertex?
- d) Determine the optimal value.

*** Hand in when done!**

Apr 17-1:16 PM

- (a) Factor: $2x^2 - 6x$
 $2x(x-3)$
- b) Determine the zeros.
 $0 \quad 3 \quad a(x-s)(x-t)$
- c) Where is the vertex?
 $\frac{0+3}{2} = 1.5$
- d) Determine the optimal value.
 $2(1.5)(1.5-3) = -4.5$
 $2(-1.5)(-1.5-3) = -4.5$
- * Hand in when done!**

Apr 17-1:16 PM

What we know

- How to FOIL
- How to factor polynomials using GCF

What we will be learning

How to factor simple trinomials: $x^2 + bx + c$
 MAXX method

Work to help you remember

Pg. 211 # 3, 4, 6abc, 7 - 9, 13, 15

Feb 22-11:43 AM

(4.3) Factoring Simple Trinomials

? What is standard form of a quadratic function?

f(x) = ax² + bx + c

Move to reveal!

Standard form

★ Your Practice!

Distribute the following.... **FOIL**

$(x+4)(x+5)$
 $x^2 + 5x + 4x + 20$
 $x^2 + 9x + 20$

$(2x-1)(x-3)$
 $2x^2 - 6x - 1x + 3$
 $2x^2 - 7x + 3$

Pull for answer

Distributing practice

Distributing
 re-writes the expression from **factored** form to **standard** form.

Factoring
 is re-writing an expression from standard form as a product of its factors or "undistributing"
factored form

What is factoring?

Apr 17-1:20 PM

Relate distribute to factor

Nov 18-12:32 PM

Nov 18-2:11 PM

Nov 18-2:25 PM

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Factor each of the following

a) $x^2 - 14x + 45$

add to -14

$x^2 - 14x + 45$

multiply to 45

$(x - 9)(x - 5)$

step 1
factor out GCF
find two numbers that multiply to add to

step 2
find two numbers

M: +45
A: -14
X: -9
X: -5

step 3
draw two sets of brackets

step 4
place x's in the first space in each bracket

step 5
place your numbers in the back of the brackets

Nov 18-8:43 PM

b) $2x^2 + 4x - 30$

of 2

$2(x^2 + 2x - 15)$

of -15

$2(x + 5)(x - 3)$

step 1
factor out GCF
find two numbers that multiply to add to

step 2
find two numbers

M: -15
A: +2
X: +5
X: -3

step 3
draw two sets of brackets

step 4
place x's in the first space in each bracket

step 5
place your numbers in the back of the brackets

Nov 18-9:04 PM

c) $-a^2 + 5a + 24$

$-1(a^2 - 5a - 24)$

$-(a^2 - 5a - 24)$

$-1(a - 8)(a + 3)$

step 1
factor out GCF
find two numbers that multiply to add to

step 2
find two numbers

M: -24
A: -5
X: -8
X: +3

step 3
draw two sets of brackets

step 4
place x's in the first space in each bracket

step 5
place your numbers in the back of the brackets

Nov 18-9:06 PM

c) $-a^2 + 5a + 24$

-1 GCF

$-(a^2 - 5a - 24)$

$-(a - 8)(a + 3)$

step 1
factor out GCF
find two numbers that multiply to add to

step 2
find two numbers

M: -24
A: -5
X: -8
X: +3

step 3
draw two sets of brackets

step 4
place x's in the first space in each bracket

step 5
place your numbers in the back of the brackets

Nov 18-9:06 PM

d) $m^2 - mn - 42n^2$

$m^2 - mn - 42n^2$

step 1
factor out GCF
find two numbers that multiply to add to

step 2
find two numbers

M:
A:
X:
X:

step 3
draw two sets of brackets

step 4
place x's in the first space in each bracket

step 5
place your numbers in the back of the brackets

Nov 18-9:06 PM

e) $x^2 - xy - 2y^2$

$x^2 - xy - 2y^2$

step 1
factor out GCF
find two numbers that multiply to add to

step 2
find two numbers

M:
A:
X:
X:

step 3
draw two sets of brackets

step 4
place x's in the first space in each bracket

step 5
place your numbers in the back of the brackets

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